

TRANSLATION

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JAPANESE PATENT SPECIFICATION

No. 50-129769 (1975)

CHOCOLATE MANUFACTURING PROCESS USING HYGROSCOPIC MATERIALS

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PATENT CLAIM

A chocolate manufacturing process using hygroscopic materials, comprising the steps of coating maltitol with a vegetable fat or other food-grade fat, separating off-size particles, blending with the remaining ingredients, grinding the whole blend to a finely divided particle size, refining, adjusting the temperature, pouring into a mold and cooling.

[As originally filed the statement of invention included, as an alternative, the coating of the hygroscopic material with a non-aqueous solvent, for example glycerol or ethanol. This was deleted by amendment on May 24, 1974. Translator.]

FULL DISCLOSURE OF THE INVENTION

This invention relates to a novel process for the production of chocolate, chocolate coatings and chocolate spreads using highly hygroscopic materials such as maltitol.

Maltitol, after production, is packed in moisture-proof bags for shipping to users. Once opened, it very rapidly picks up moisture. Because of this characteristic, it absorbs moisture during size reduction in the refiner for blending with the other ingredients and as size reduction takes place, so that no smooth chocolate can be made. Mechanical filling is impossible because of the product's high viscosity, so that overall productivity is depressed.

The object of the present invention is to provide a process capable of producing chocolate free from moisture and having the same smoothness as is obtained with sugar (sucrose). The process is free from operational difficulties even though extremely hygroscopic materials are used.

[Repetition of patent claim omitted.]

Since, according to the present invention, the extremely hygroscopic maltitol has been coated with food-grade vegetable fats such as cocoa butter and the usual non-aqueous solvents, the maltitol itself is not exposed to the atmosphere. Consequently, it cannot pick up moisture and a smooth chocolate can be produced.

The invention will now be illustrated by reference to an example in which the following ingredients were used:

Malbit (a trade name for maltitol)	2850
Cocoa mass	1600
Cocoa butter	1000
Full-cream powdered milk	930
Flavoring	3
Lecithin	4
Sugar (sucrose) esters	2
Total	6389

[No unit is given for any of the quantities in this table. In the text the quantity of Malbit is given as 2850 kg and the cocoa mass as 1600 kg but quantities of the other ingredients are expressed in grams only. Translator.]

Of the above ingredients 2850 kg Malbit, 1600 kg cocoa mass, 600 g of cocoa butter, 2 g of lecithin, 2 g of sugar esters and 3 g of flavoring were first compounded and refined in the refiner. There were no coarse particles. The remaining ingredients were then added, followed by further refining to a particle size of 400 mesh. The temperature was then adjusted, the composition poured into molds and cooled. Moisture-free chocolate was recovered.